

## WIND SPEED • TEMPERATURE • WIND CHILL

### Know your conditions

Measure environmental conditions quickly and accurately

Wide range of wind speeds and a low start-up speed

Reliable, portable and easy to use

- Small, robust design
- Data hold function
- Large easy to read display with backlight
- Waterproof and floats
- High precision Zytel® mounted impeller
- Replaceable impeller assembly
- Fast response temperature sensor
- Long life lithium battery
- Includes protective cover, lanyard and battery
- 5 year warranty
- Choice of measurement units: Knots, Metres per second, Kilometres per hour, Miles per hour, Feet per minute and Beaufort Force. Centigrade and Fahrenheit



### Measurement

Current, Max and Average  
Wind speed  
Temperature, Wind Chill

### Units of Measure

knots, m/s, km/h, mph,  
ft/min, Beaufort (B)  
°C, °F

### Accuracy

±3% of reading  
or ±0.1 m/s  
±1°C

### Range

0.6 to 40 m/s  
-29 to +70°C

## DESCRIPTION

The Kestrel 2000 thermo anemometer provides high quality, performance and functionality. It has three buttons below the display, making operation simple and allowing the user to view data in current, maximum and average wind speed displays, temperature and wind chill displays and also the data hold function.

The Kestrel 2000 is a small, electronic rotating vane type anemometer with a built-in temperature sensor. It uses high precision Zytel® bearings and a lightweight impeller to provide accurate air flow measurements even at low speeds. The impeller assembly is replaceable by the user in the case of damage. In order to quickly determine a steady temperature reading, the precision thermistor temperature sensor is mounted externally.

The liquid crystal display has large 9mm high digits and is backlit for a clear readout in low light conditions. Power is from an easily replaceable standard lithium coin cell battery, which will typically give up to 300 hours of operation. The instrument

automatically switches off if no keys are pressed for 45 minutes.

The Kestrel 2000 is made from high impact injection moulded plastic and corrosion resistant materials with the electronics fully sealed. It will float if accidentally dropped into water. There is a hard cover for protection when not in use and a lanyard for added security.

## APPLICATIONS

**Agriculture** – checking conditions prior to crop spraying or burning

**Aviation** – gliders, para-gliders, micro-lights, parachutists and ballooning

**Construction** – site safety, working conditions, working at height in cranes or access vehicles

**Education** – air flow experiments, environmental studies, outdoor sports

**Heating and ventilation** – air flow through fans, checking condition of filters

**Industry** – air flow measurements, pollution control

**Science** – aerodynamics, environmental science and meteorology

**Fire fighters** – checking fire spreading hazard

**ALL** - sailors, walkers, model boats/air craft, kite flyers, archery, shooting, fishing, golf & athletics

## SPECIFICATION

Physical	Dimensions		122mm x 42mm x 20mm
	Cover dimensions		122mm x 46mm x 26mm
	Weight		65g
	Cover weight		37g
	Lanyard		0.5m
	Case colour		Green
Display	Display type		Reflective 3½ digit LCD
	Digit height		9mm
	Display update		1 second
	Functions	Current wind speed (3 second average)	
		Average speed since power on (AVG)	
		Maximum 3 second gust since power on (MAX)	
		Temperature	
		Wind chill	
		Data hold (HOLD)	
Performance	Speed units		kt, m/s, km/h, mph, ft/min, Beaufort Force (B)
	Temperature units		°C, °F
	Speed (1 sec response)	Operational range	0.6m/s to 60m/s (1.3 to 135.0mph)
		Specification range	0.6m/s to 40m/s (1.3 to 89.0mph) Start-up speed stated as lower limit, readings may be taken down to 0.4 m/s   79 ft/min   1.5 km/h   .9 mph   .8 kt after impeller start-up.
		On axis accuracy	Larger of ± 3% of reading or least significant digit. (Some loss of accuracy from bearing wear may occur with sustained operation at or near maximum speed)
		Off-axis response	-1% @ 5°, -2% @ 10°, -3% at 15°
		Calibration drift	<1% after 100hrs operation at 7m/s
		Resolution	0.1 kt, m/s, km/h, mph. 1 FPM below 1999 FPM, 10 FPM above 2000 FPM. 1 Beaufort (0 to 12)
	Temperature (1 sec response)	Operational range	-45.0°C to +125.0°C
		Specification range	-29.0°C to +70.0°C
		Accuracy	±1°C
		Resolution	0.1°
	Wind chill accuracy		±1.0°C (from wind speed and temperature)
Sensors	Impeller		Diameter 25mm. High precision axle and low-friction Zytel® bearings. Replacement impeller field installs without tools.
	Temperature		Air, water or snow temperature. Hermetically-sealed, precision thermistor mounted externally and thermally isolated (US Patent 5,939,645) for rapid response. Airflow of 2.2 mph   1 m/s or greater provides fastest response and reduction of insulation effect. Calibration drift negligible.
Environmental	Sealing		Electronics enclosure IP67 [Water resistant] and NEMA-6
	Shock		Drop tested (MIL-STD.810F - unit only)
	Temperature		Operating range: -10°C to +55°C (for LCD readability and batteries) Storage range: -30°C to +60°C
	EMC		CE marked
Miscellaneous	Battery		Lithium coin cell CR2032, included, user replaceable
	Battery Life		300 hours of use, typical ± depending on backlight use
	Auto switch off		45 minutes after last key press
	Cover		Snap on hard cover for protection
	Wind chill equivalent temperature calculation		Perceived temperature resulting from combined effect of wind speed and temperature. Utilises the (US) NWS Wind Chill Temperature (WCT) Index, revised 2001, with wind speed adjusted by a factor of 1.5 to yield equivalent results for wind speed measured at 10m above ground
	Certification		Wind speed and temperature measurements are tested during manufacture. A certificate of conformity (C of C) is included with each Kestrel. Calibration certificates are available for an additional fee.